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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,008	12/16/2005	Helmut Forstner	281973US6PCT	6034
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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
ALANKO, ANITA KAREN				
ART UNIT		PAPER NUMBER		
1792				
NOTIFICATION DATE		DELIVERY MODE		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/561,008

Applicant(s)

FORSTNER ET AL.

Examiner

Anita K. Alanko

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 31-66 is/are pending in the application.
- 4a) Of the above claim(s) 51-66 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 31-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-893)
Paper No(s)/Mail Date 12/16/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Election/Restrictions

Applicant's election without traverse of Group I in the reply filed on 2/28/08 is acknowledged.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 35-42, 44-47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 35-42 and 44-47 are wherein clauses, and it is unclear what the manipulative steps of the invention are.

In claim 41, line 2, the term "the glass plate" lacks proper antecedent basis.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 34-36, 39-41, 43-44 are rejected under 35 U.S.C. 102(b) as being anticipated by Försnel (US 5,837,958).

Försnel discloses a method comprising directing, to locally remove a coating (silicon oil residues from metal surfaces, col.4, lines 47-50, since broadly interpreted residues form a coating that is desired to be removed), the plasma 34 onto the region of the substrate from which the coating is to be removed, wherein

plasma having an effective width/area determined by number of plasma nozzles 24 (Fig.2) which corresponds at least to the width/area of a region from which the coating is to be removed, is directed onto the surface of the substrate 36 from which the coating is to be removed (groove 38), to remove the coating on a part-area.

As to claim 35, Försnel discloses to direct onto the substrate in a row of at least two adjacent beams (see Fig.2).

As to claim 36, Försnel discloses to change a coverage width of plasma and substrate by deactivating or activating plasma beams (col.5, lines 51-53).

As to claim 39, Försnel discloses relative movement between the plasma and substrate (col.5, lines 25-27).

As to claims 40-41, 43-44, since no other description is disclosed in Försnel, it is expected that movement is parallel and normal to the face of the substrate, as cited.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Försnel in view of Babko-Malyi (US 2003/0106788 A1).

The discussion of Försnel from above is repeated here.

As to claim 37, Försnel fails to disclose the use of a slit-shaped source. It would have been an obvious matter of design choice to use a slit-shaped source, since such a modification would have involved a mere change in the size of a component. A change of size is generally recognized as being within the ordinary level of skill in the art. *In re Dailey*, 357 F.2nd 669, 149 USPQ 1966.

Still further, Babko-Malyi teaches that it is known to change the shapes of openings to either slits and/or holes (paragraph [0038] last line). It would have been obvious to one with ordinary skill in the art to use slits in the method of Försnel in order to direct the plasma in a desired shape to correspond with a desired shape of coating removal, as is useful as taught by Babko-Malyi to yield the predictable result of coating removal.

As to claim 38, the slit-shaped source as in the method of claim 37 inherently changes coverage width of plasma and substrate, as in the context of claim 38.

Claims 42-46, 48-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Försnel in view of Siniaguine et al (US 6,238,587 B1).

The discussion of Försnel from above is repeated here.

As to claim 42, Försnel fails to disclose varying the angle of the plasma jet. It is noted that apparatus limitations, unless they affect the process in a manipulative sense, may have little weight in process claims. *In re Tarczy-Hornoch* 158 USPQ 141, 150 (CCPA 1968); *In re Edwards* 128 USPQ 387 (CCPA 1961); *Stalego v. Heymes* 120 USPQ 473, 478 (CCPA 1959); *Ex parte Hart* 117 USPQ 193 (PO BdPatApp 1957); *In re Freeman* 44 USPQ 116 (CCPA 1940); *In re Sweeney* 72 USPQ 501 CCPA 1947).

Siniaguine teaches that it is useful to vary the angle of the plasma jet relative to the coating to be removed (col.3, lines 27-41) in order to influence the conditions of the plasma flowing over the surface, and thereby influence coating removal. It would have to vary the angle in the method of Försnel because Siniaguine teaches that varying the angle is known and useful, and such is expected to yield the predictable result of coating removal.

As to claim 43-44, 48, Försnel removes from a face of a substrate, but it would have also been obvious to remove from an edge as cited because it is obvious to remove coatings that are not needed in the final product, such as from the edge.

As to claims 45-46, it is unclear how the shield effects the method in a manipulative sense, and thus is given little patentable weight.

As to claims 49-50, it would have been obvious to use the method of Försnel to remove the cited coatings because they are conventionally removed by plasma etching and is

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advantageous in that reactant species can be optimized depending on the type of coating to be removed.

Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Försnel in view of Tanaka et al (US 2002/0008082 A1).

The discussion of Försnel from above is repeated here.

As to claim 47, Försnel fails to explicitly disclose a discharge device. It is noted that apparatus limitations, unless they affect the process in a manipulative sense, may have little weight in process claims. *In re Tarczy-Hornoch* 158 USPQ 141, 150 (CCPA 1968); *In re Edwards* 128 USPQ 387 (CCPA 1961); *Stalego v. Heymes* 120 USPQ 473, 478 (CCPA 1959); *Ex parte Hart* 117 USPQ 193 (PO BdPatApp 1957); *In re Freeman* 44 USPQ 116 (CCPA 1940); *In re Sweeney* 72 USPQ 501 CCPA 1947).

Tanaka teaches that suctioning or evacuating by-products (by 60a) is useful when using a plasma jet (Fig.2) in order to achieve high accuracy in coating removal. It would have been obvious to use a discharge device in the method of Försnel because Tanaka teaches that it is useful to achieve high accuracy in coating removal.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited art shows methods of plasma etching with nozzles.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anita K. Alanko whose telephone number is 571-272-1458. The examiner can normally be reached on Mon-Fri until 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on 571-272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Anita K Alanko/
Primary Examiner
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